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10/043,154	01/14/2002	Nobuya Harano	2001P005978	5070

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EXAMINER

WEST, LEWIS G

ART UNIT PAPER NUMBER

2682

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/043,154

**Applicant(s)**

HARANO, NOBUYA

**Examiner**

Lewis G. West

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12,14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-3, 5-12, 14 and 15 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5, 7 and 8 rejected under 35 U.S.C. 103(a) as being obvious over Mizoguchi (US 6,678,532) in view of Werling (US 6,456,856 B1).

Regarding claim 1, Mizoguchi discloses a portable radio terminal device for radio communication by using an antenna provided in a housing capable of being held by one hand, wherein: a first antenna capable of transmission disposed in a lower part of the housing and a second antenna disposed in an upper part of the housing for radio communication, said first antenna and said second antenna being selectively switched for use, a sensor for sensing when the first antenna is covered and outputting a detection signal; and means for switching between said first antenna and said second antenna for use based on said detection signal. (Col. 10 line 47-Col 12- line 8) Mizoguchi does not expressly disclose that the second antenna is capable of transmission. Werling discloses a portable radio terminal device comprising: a plurality of transmission antennas separately provided; a detector for detecting the deterioration of an antenna characteristic; and a

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switch for switching, on the basis of the detected result, the operation from the deteriorated transmission antenna to a different transmission antenna. (Col. 3 line 34-col. 4 line 24) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to switch from a degraded antenna to another antenna to transmit in order to avoid interference by human tissue and also to avoid harmful radiation to said tissue.

Regarding claim 3, the combination of Mizoguchi and Werling discloses the portable radio terminal device according to claim 1, wherein the first or the second antenna is predetermined to be a normally used antenna. (Col. 10 line 47-Col 12- line 8)

Regarding claim 5, the combination of Mizoguchi and Werling discloses the portable radio terminal device according to claim 4, wherein the sensor is a touch sensor. (Col. 10 line 47-Col 12- line 8)

Regarding claim 7, the combination of Mizoguchi and Werling discloses the portable radio terminal device according to claim 4, wherein a plurality of sensors are used to sense the extent of the covering of the antenna. (Col. 10 line 47-Col 12- line 8)

Regarding claim 8, the combination of Mizoguchi and Werling discloses the portable radio terminal device according to claim 4, wherein the sensor is an impedance change detecting means for detecting a change in the impedance of the antenna. (Col. 10 line 47-Col 12- line 8)

4. Claims 9, 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being anticipated by Werling (US 6,456,856 B1) in view of Bowen (US 5,224,151).

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Regarding claim 9, Werling discloses a portable radio terminal device comprising: a plurality of transmission antennas separately provided; a detector for detecting the deterioration of an antenna characteristic; and a switch for switching, on the basis of the detected result, the operation from the deteriorated transmission antenna to a different transmission antenna. (Col. 3 line 34-col. 4 line 24) but does not expressly disclose an optical sensor. Bowen discloses a mobile radiotelephone wherein a sensor for detecting human proximity, especially the human head (see Figures 2-6) in order to change functional operation of the phone. (Col. 2 lines 10-61) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Werling to use an optical sensor to detect human proximity so that harmful radiation may be directed away from said tissue, and for optimum antenna use to prevent degradation and prevent the unnecessary use of power that can be saved by using a more desirable antenna, and infrared being an inexpensive and widely used type of sensor.

Regarding claim 11, Werling discloses to claim 9, wherein the detector detects the antenna at least a part of which is covered with a hand or is touched with a head. (Col. 4 lines 4-10)

Regarding claim 12, Werling discloses the portable radio terminal device according to claim 9, wherein the detector is a touch sensor for detecting the touch of hand or head. (Col. 4 liners 4-10)

Regarding claim 15, Werling discloses the portable radio terminal device according to claim 1, wherein a plurality of detectors is provided. (Col. 2 lines 17-24)

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6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi (US 6,678,532) in view of Werling (US 6,456,856 B1) further in view of Narayanaswamy (US 5,905,467).

Regarding claim 2, the combination of Mizoguchi and Werling discloses the portable radio terminal device according to claim 1, wherein the housing is of a foldable type comprising an upper and a lower housing hinged together by a hinge part, the first and second antennas are disposed in the lower and upper housings, respectively.

Narayanaswamy discloses a portable radio terminal device with switchable antennas wherein the device is a foldable type including a first housing provided with a first antenna and a second housing provided with a second antenna which are hinged together by a hinge part, and further discloses that the respective antennas may both be internal. (Col. 2 line 31-col. 3 line 65) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have internal antennae in separate housing sections, to aid in antenna diversity for communication.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi (US 6,678,532) in view of Werling (US 6,456,856 B1) further in view of Bowen(US 5,224,151).

Regarding claim 6, the combination of Mizoguchi and Werling discloses a radiotelephone according to claim 1, but does not expressly disclose an optical sensor. Bowen discloses a mobile radiotelephone wherein a sensor for detecting human proximity, especially the human head (see Figures 2-6) in order to change functional operation of the phone. (Col. 2 lines 10-61) Therefore, it would have been obvious to one

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of ordinary skill in the art at the time of the invention to modify Werling to use an optical sensor to detect human proximity so that harmful radiation may be directed away from said tissue, and for optimum antenna use to prevent degradation and prevent the unnecessary use of power that can be saved by using a more desirable antenna, and infrared being an inexpensive and widely used type of sensor.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Werling (US 6,456,856 B1) in view of Bowen and further in view of Narayanaswamy (US 5,905,467).

Regarding claim 10, the combination of Werling and Bowen discloses the portable radio terminal device according to claim 9, but does not disclose that the portable radio terminal device is a foldable type including a first housing provided with a first antenna and a second housing provided with a second housing which are hinged together by a hinge part. Narayanaswamy discloses a portable radio terminal device with switchable antennas wherein the device is a foldable type including a first housing provided with a first antenna and a second housing provided with a second antenna which are hinged together by a hinge part. (Col. 2 line 31-col. 3 line 65) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have antennae in separate housing sections, to aid in antenna diversity for communication.

10. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Werling (US 6,456,856 B1) in view of Bowen and further in view of Mizoguchi (US 6,678,532).

Regarding claim 14, the combination of Werling and Bowen discloses the portable radio terminal device according to claim 9, but does not disclose a detected impedance change of the antenna. Mizoguchi discloses a portable radio terminal device wherein a detector detects an impedance change of the antenna. (Col. 10 line 47-Col 12-line 8) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use an impedance change to detect the presence of human tissue, so that harmful radiation may be directed away from said tissue, and for optimum antenna use to prevent degradation and prevent the unnecessary use of power that can be saved by using a more desirable antenna.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis G. West whose telephone number is 703-308-9298. The examiner can normally be reached on Monday-Friday 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).




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**PRIMARY EXAMINED**